

AMENDMENT IN THE CLAIMS

Please cancel claims 21, 22, 25 and 26 without prejudice or disclaimer as to their subject matter and newly add claims 29-32 by this amendment as follows:

1 1. (Original) An inkjet printhead, comprising:
2 a base plate provided with a plurality of chambers to be filled with ink;
3 a nozzle plate installed on the base plate and provided with orifices communicating with
4 the respective chambers;
5 a plurality of heaters for generating heat when respective currents are independently
6 applied, and heating the ink in the respective chambers so that ink bubbles can be generated to
7 eject respective ink droplets through the respective orifices; and
8 a plurality of ink inlet passages for supplying ink from an ink reservoir to the respective
9 chambers, wherein a plurality of grooves are formed at an inner wall of each of the ink inlet
10 passages.

1 2. (Original) The inkjet printhead as claimed in claim 1, wherein the ink inlet passages are
2 formed in the base plate.

1 3. (Original) The inkjet printhead as claimed in claim 1, wherein each of the heaters is
2 installed on the outer side of the nozzle plate to heat the ink in the corresponding chamber
3 indirectly via said nozzle plate by conduction.

1 4. (Original) The printhead of claim 1, each one of said plurality of chambers being
2 hemispherical.

1 5. (Original) The printhead of claim 1, each of said plurality of ink inlet passages extends
2 through said base plate.

1 6. (Original) The printhead of claim 4, each one of said plurality of ink inlet passages
2 extend through said base plate to a bottom of a respective one of said plurality of hemispherical
3 chambers.

1 7. (Original) An inkjet printhead, comprising:
2 a substrate provided with a plurality of chambers to be filled with ink;
3 a nozzle plate installed on top of the substrate and provided with orifices communicating
4 with the respective chambers;

5 a plurality of heaters for generating heat when respective currents are independently
6 applied, and heating the ink in the respective chambers so that ink bubbles can be generated to
7 eject respective ink droplets through the respective orifices; and

8 a plurality of ink inlet passages extending through said substrate from bottoms of
9 respective ones of said plurality of chambers for supplying ink from an ink reservoir to the
10 respective chambers, wherein a plurality of grooves are formed at an inner wall of each of the ink
11 inlet passages.

1 8. (Original) The printhead of claim 7, each of said plurality of chambers being
2 hemispherical and being disposed at said top of said substrate, each of said plurality of ink inlet
3 passages extending from bottoms of respective ones of said plurality of hemispherical ink
4 chambers.

1 9. (Original) The printhead of claim 8, wherein each one of said plurality of heaters
2 having a donut shape and encircling said orifices.

1 10.(Original) The printhead of claim 9, wherein said plurality of heaters are disposed on
2 an underside of said nozzle plate and facing respective ones of said plurality of chambers.

1 11. (Original) The printhead of claim 9, wherein said plurality of heaters being disposed
2 on a top side of said nozzle plate facing away from respective ones of said plurality of ink
3 chambers and applying heat to ink in respective ones of said ink chambers by conduction of heat
4 through said nozzle plate to said ink in said ink chambers.

1 12. (Original) An inkjet printhead, comprising:
2 a base plate being perforated by a plurality of hour-glass structures, a top portion of said
3 hour glass portions being respective ones of a plurality of chambers to be filled with ink;
4 a nozzle plate installed on the base plate and perforated with a plurality of nozzle holes

5 communicating with the respective chambers;

6 a plurality of heaters for generating heat when respective currents are independently
7 applied, and heating the ink in the respective chambers so that ink bubbles can be generated to
8 eject respective ink droplets through the respective nozzle holes; and

9 a plurality of ink inlet passages for supplying ink from an ink reservoir to the respective
10 chambers, wherein a plurality of grooves are formed at an inner wall of each of the ink inlet
11 passages.

13. (Original) The printhead of claim 12, a bottom of said hour glass portions being a
1 plurality of funnels for drawing in ink to replenish respective ones of said ink chambers, said ink
3 inlet passages connecting respective ones of said funnels with respective ones of said ink
4 chambers and forming a middle portion of said hour-glass shaped perforations of said base plate.

14. (Original) The printhead of claim 12, each of said plurality of ink chambers being
1 hemispherical and forming a top portion of said hour-glass perforation of said base plate.
2

15. (Original) The printhead of claim 12, each one of said plurality of heaters having a
1 donut shape and encircling respective ones of said nozzle holes.
2

16. (Original) The printhead of claim 15, said plurality of heaters are disposed on an
1 underside of said nozzle plate and facing respective ones of said plurality of chambers.
2

1 17. (Original) The printhead of claim 15, said plurality of heaters being disposed on a top
2 side of said nozzle plate facing away from respective ones of said plurality of ink chambers and
3 applying heat to ink in respective ones of said ink chambers by conduction of heat through said
4 nozzle plate to said ink in said ink chambers.

1 18. (Original) The printhead of claim 13, each one of said plurality of heaters having a
2 donut shape and encircling respective ones of said nozzle holes.

1 19. (Original) The printhead of claim 18, said plurality of heaters are disposed on an
2 underside of said nozzle plate and facing respective ones of said plurality of chambers.

1 20. (Original) The printhead of claim 18, said plurality of heaters being disposed on a top
2 side of said nozzle plate facing away from respective ones of said plurality of ink chambers and
3 applying heat to ink in respective ones of said ink chambers by conduction of heat through said
4 nozzle plate to said ink in said ink chambers.

1 21.(Canceled)

1 22. (Canceled)

1 23. (Previously added) The printhead of claim 7, each of said plurality of ink inlet
2 passages extend through said substrate, each of said plurality of ink inlet passages having an
3 essentially circular cross-section, said plurality of grooves being disposed around an entire
4 circumference of each inner wall of each of said plurality of ink inlet passages.

1 24.(Previously added) The printhead of claim 7, said printhead being a bubble jet type
2 ink jet printhead with said plurality of heaters forming said bubbles in respective chambers, said
3 plurality of grooves extending through said substrate in said inner walls of each of said plurality
4 of ink inlet passages.

1 25. (Canceled)

1 26. (Canceled)

1 27. (Previously added) The printhead of claim 12, said plurality of grooves being formed
2 over an entire portion of said inner wall of each of said plurality of ink inlet passages.

1 28. (Previously added) The printhead of claim 7, said plurality of grooves being disposed
2 on each inner wall in a direction parallel to a direction through said substrate.

1 29. (New) The printhead of claim 1, each chamber being disposed between respective

2 ones of said ink inlet passages and respective ones of said orifices.

1 30. (New) The printhead of claim 1, each ink inlet passage being directly connected to
2 respective ones of said chambers.

31. (New) The printhead of claim 1, a volume of each ink inlet passage being
2 significantly smaller than a volume of each one of said plurality of chambers.

1 32. (New) The printhead of claim 1, each ink inlet passage having a diameter that is
2 much smaller than a diameter of each of said plurality of chambers.
